NESHAP Regulatory Update

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Naval Facilities Engineering Service Center

Western Region Air Manager's Roundtable

November 3-4, 2004

U.S. Air Force Major HAP Sources

AFMC

- Arnold Engineering Development Center
- Edwards AFB
- Eglin AFB
- Hill AFB
- Robins AFB
- Tinker AFB
- Wright-Patterson AFB

AFMC (GOCO)

- Air Force Plant #04
- Air Force Plant #06

U.S. Army Major HAP Sources

AMC

- Anniston AD
- Corpus Christi AD
- Crane AAP
- Holston AAP
- Iowa AAP
- Lake City AAP
- Letterkenny AD
- Lima Tank Plant
- Longhorn AAP
- McAlester AAP
- Milan AAP
- Pine Bluff Arsenal
- Radford AAP
- Red River AD

AMC (Cont.)

- Redstone Arsenal
- Rock Island Arsenal
- Sierra AAP
- Tobyhanna AD

TRADOC

- Fort Benning
- Fort Gordon
- Fort Jackson
- Fort Knox
- Fort Leavenworth
- Fort Rucker

FORSCOM

- Fort Bragg
- Fort Campbell
- Fort Carson
- Fort Hood
- Fort Lewis
- Fort Riley
- Fort Stewart

USARPAC

- Fort Wainwright

U.S. Navy/Marine Corps Major HAP Sources

HQMC

- MCAS Cherry Pt.
- MCAS New River
- MCB Camp Lejeune
- MCLB Albany
- MCLB Barstow
- Blount Island Command

LANTFLT

- NAS Jacksonville
- NAS Oceana
- NAVSTA Norfolk
- SUBASE New London

PACFLT

- FISC Pearl Harbor
- NAS North Island
- NAS Whidbey Island
- NAVSTA Bremerton
- NAVSTA Pearl Harbor
- PWC Pearl Harbor

CNET

- NTC Great Lakes

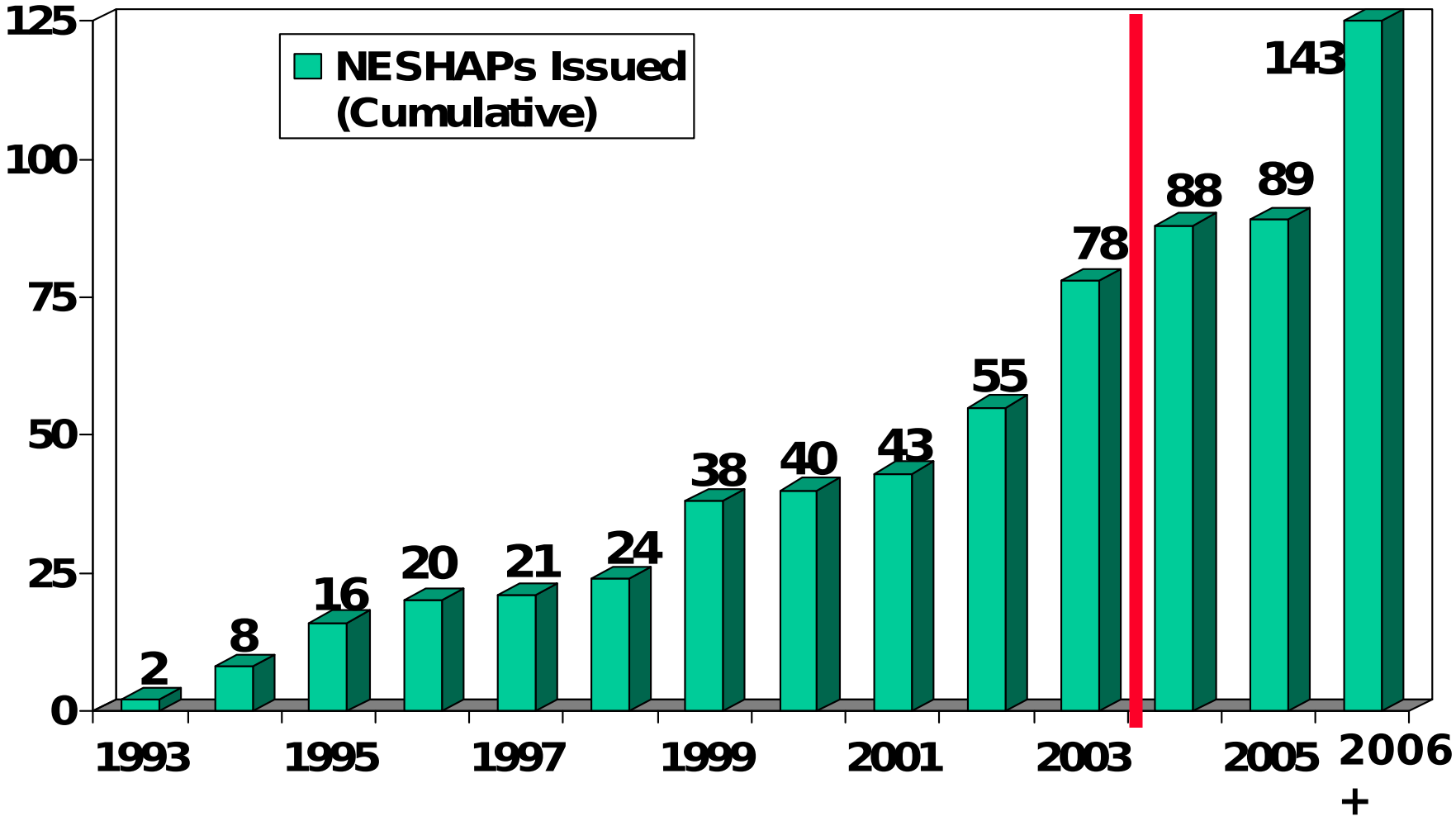
NAVAIR

- NADEP Cherry Pt.
- NADEP Jacksonville
- NADEP North Island
- NAWS China Lake

NAVSEA

- NSWC Crane
- NSWC Indianhead
- NSY Norfolk
- NSY Pearl Harbor
- NSY Puget Sound

NESHAP Regulatory Progress (Chart Updated 1/1/04)



What's New?
HAP Delisting Petitions

- **Notice of Complete Petition**
  - **Methyl Isobutyl Ketone (7/19/04)**
- **Proposed for Delisting (Still Pending)**
  - **Methyl Ethyl Ketone (5/30/03)**
  - **Ethlyene Glycol Butyl Ether (11/11/03)**
- **Delisting Petition Denied**
  - **Methanol (5/2/01)**
- **Delisted**
  - **Caprolactum (6/18/96)**

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Regulatory Activity Involving SURFACE COATING Rules

- Aerospace NESHAP Residual Risk (Pre-Rule)
- Automobile and Light Duty Truck (5/29/03)
- Miscellaneous Metal Parts & Products (1/2/04)
- Plastic Parts & Products (5/19/04)
- Defense Land Systems & Miscellaneous Equipment (Pre-

What's New?
Future Surface Coating Rules

Aerospace NESHAP Residual Risk

- **Initial Screening Showed Significant Risk**
  - 73 of 136 facilities had cancer risk $\geq 1x10^{-6}$
  - 25 of 136 facilities had hazard index of ≥ 0.2
- **Risk Drivers**
  - Cr+6 (in most cases)
  - PCE (in a few cases)
- **Next Steps**
  - EPA obtain contractor support
  - Refine Cr+6 assumptions and rerun model
  - Refine data with stakeholders if risk remains

What's New?
Final Surface Coating Rules

- **Automobile and Light Duty Truck (5/29/03)**
  - **Does *NOT* exempt the Armed Forces but probably does not apply because it only affects major HAP source facilities that apply topcoat to *NEW* automobiles bodies or *NEW* light-duty truck bodies or body parts for new automobiles or new light-duty trucks. It does *NOT* affect automobile customizers, body shops, and refinishers.**
  - **Automobile means a motor vehicle designed to carry up to eight passengers.**
  - **Light-duty truck means vans, sport utility vehicles, and motor vehicles designed primarily to transport light loads of property with gross vehicle weight rating of 8,500 lbs or less.**

What's New?
Final Surface Coating Rules

- **Misc. Metal Parts & Products (1/2/04) & Plastic Parts & Products (4/19/04)**
  - ***Exempt*** **surface coating of parts and products** ***performed on-site at installations owned or operated by*** **the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State) or the National Aeronautics and Space Administration.**
  - ***Exempt*** **surface coating of** ***military munitions manufactured by or for*** **the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State).**

What's New?
Future Surface Coating Rules

- **Defense Land Systems & Miscellaneous Equipment (DLSME)**
  - **Rulemaking in progress**
  - **Will cover coating operations performed on-site at installations owned or operated by the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State) or the National Aeronautics and Space Administration**
  - **Will cover major HAP sources**
  - **May cover some operations at area sources**
  - **May cover some facility maintenance**

What's New?
Future Surface Coating Rules

- **DLSME**
  - **Sep 02: EPA/SSC agreed to develop DLSME**
  - **Sep 02: EPA site visit – Hill AFB**
  - **May 03: EPA site visit – Fort Lewis/NSY Puget**
  - **Jan 03-Sep 04: Lisa Trembly detailed to EPA**
  - **Sep 03: EPA/DoD DLSME workshop at RTP NC**
  - **Jan 04-Mar 04: Data call**
  - **Jun 04: Initiated data submission to EPA**
  - **Jun 04: EPA site visit - Anniston Army Depot**
  - **Sep 04: EPA/DoD DLSME workshop at RTP NC**
  - **Jan 06: Propose**
  - **Jan 07: Promulgate**

What's New?
Future Surface Coating Rules

- **DLSME (Current EPA Thinking – Aug 04)**
  - **Area source plastic part coating rule may not affect military facilities. If so, DLSME is not likely to cover area sources.**
  - **There is an outside chance DLSME would cover area source paint stripping operations and autobody refinishing, if advantageous to DoD.**
  - **The rule may affect mission-related facility maintenance…yet to be defined.**
  - **The rule will likely exempt infrastructure/MWR facility maintenance.**

What's New?
Future Surface Coating Rules

- **DLSME (Current EPA Thinking – Aug 04)**
  - **DLSME may address military unique situations.**
  - **DLSME will allow facilities (or portions thereof) that are dedicated to aerospace or shipbuilding, to subject all aircraft or ship-related coating operations to those NESHAPs.**
  - **DLSME will likely exempt aerosol spray coatings, touchup markers, marking pens, hobby shops, and research and laboratory facilities.**
  - **DLSME will focus on the categories that account for most (90%+) HAP emissions.**

Future Rules - Area Source NESHAPs
Current EPA Thinking (Very Draft)

- **Paint Stripping Operations NESHAP**
  - **Will affect major and area HAP sources**
  - **Will affect chemical stripping (VOHAP) only**
  - **Work practice requirements if use >5 gal/yr**
  - **GACT required if use > 1000 lb/yr (small business analysis may change this value)**
  - **GACT = use alternative stripping methods to reduce HAP use below 1000 lb/yr**
  - **May include facility maintenance**
  - **Minimal recordkeeping and reporting**
  - **What about aircraft depainting at area sources?**
  - **Propose Jan 06**

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Regulatory Activity Involving COMBUSTION SOURCE Rules

- Industrial, Commercial, & Institutional (ICI) Boilers & Process Heaters (9/13/04)
- Stationary Reciprocating Internal Combustion Engines (RICE) (6/15/04)
- Stationary Combustion Turbines (3/5/04)
- Engine Test Facilities (5/27/03)

What's New?
Final Rules

ICI Boilers & Process Heaters (9/13/04)

Limits HAP and CO emissions from all existing large/limited use (L/LU) solid fuel units and new/reconstructed (N/RC) L/LU solid fuel & residual oil units. Also limits CO emissions from N/RC L/LU gaseous units.

- **Applicability**
  - **Major HAP sources**
  - **Existing/new/reconstructed**
- **Exemptions Include**
  - **Temporary units: 6 months**
  - **Hot water heaters: 120 gallons or less**
  - **R&D units**
- **Affected Source**
  - ***All* existing units in a subcategory**
  - ***Each* new/RC unit**
- **Limited Requirements**
  - **New/RC liquid fuel units that do not burn residual oil**
- **Of Note**
  - **Alternative health-based standards for HCl & Mn**
  - **Gas-fired units that only burn oil during gas curtailment are still gas-fired units**
  - **Area source rule in future**
  - **All firetube boilers are small**

Boilers & Process Heaters NESHAP

Affects Units on Major HAP Sources Only

Fuel Type	Subcategory	Existing	New & Reconstructed
Solid	Large	3	3
	Limited Use		
	Small	1	
Liquid	All		
Gas	Large		2
	Limited Use		
	Small		

Green (1) = Not affected

Yellow (2) = Affected (Subject to CO limit only)

Red (3) = Affected *(Limited requirements apply to liquid fuel units that burn no residual oil.)*

Boilers & Process Heaters NESHAP

Affects Units on Major HAP Sources Only

Fuel Type	Subcategory	Limit (lb/MMBTU)				
		PM	PM Alt Metals	HCl	Hg	CO (ppm)
Existing Boilers and Process Heaters						
Solid	Large	0.07	0.001	0.09	0.000009	N/A
	Limited Use	0.21	0.004	N/A	N/A	
	Small	N/A				
Liquid	Large					
	Limited Use					
	Small					
Gas	Large					
	Limited Use					
	Small					

Large - Heat Input Rating > 10 MMBtu ***(Exception: All Firetube Boilers are Small)***

Limited Use – Large Unit with an Annual Capacity Factor ≤ 10%

Boilers & Process Heaters NESHAP

Affects Units on Major HAP Sources Only

Fuel Type	Subcategory	Limit (lb/MMBTU)				
		PM	PM Alt Metals	HCl	Hg	CO (ppm)
New and Reconstructed Boilers and Process Heaters						
Solid	Large	0.025	0.0003	0.02	0.000003	400@ 7%O2
	Limited Use					
	Small	N/A				
Liquid - see note a	Large	0.03	N/A	0.0005	N/A	400@ 7%O2
	Limited Use			0.0009		
	Small					N/A
Gas	Large	N/A				400@ 7%O2
	Limited Use					
	Small					N/A

a) Liquid units that burn no residual oil: Large and limited use liquid units need only demonstrate via limited recordkeeping and reporting that no residual oil is burned; small units need only submit an initial notification.
Large - Heat Input Rating > 10 MMBtu [Except All Firetube Boilers are Small]
Limited Use – Large Unit with an Annual Capacity Factor ≤ 10%

What's New?
Final Rules

Stationary Reciprocating IC Engines (6/15/04)

Limits emissions from existing 4SRB and new/reconstructed units other than emergency, limited use, or waste gas fueled units.

- **Applicability**
  - **Major HAP sources**
  - **Existing/new/RC**
  - **> 500 bhp (site-rated)**
  - *Excludes* **nonroad engines: portable/transportable units**
  - **See Figure 2 & Table 4**
- **Affected Source**
  - *Each* **RICE**
- **Limited Requirements**
  - **Existing CI, 2SLB, & 4SLB: no requirements**
  - **Emergency and limited use units: submit initial notification (IN) only**
    - **≥ 10% waste gas fueled units: IN and fuel R&R**
- **Of Note**
  - **Emergency units: no time limits on emergency use or maintenance and 50 hours/yr non-emergency use allowed**
  - **Limited use: <100 hours/yr**
  - **Area source rule in the future**

RICE NESHAP: UPDATE

Affects Units on Major HAP Sources Only

Rating (bhp)	Use	Engine Type			
		Existing	New/Reconstructed		
		SI			CI
		4SRB	4SLB	2SLB	All
>500	Emergency/ Limited Use	2			
	Landfill/Digester Gas Fueled				
	All Other	3a	3b	3c	3d
≤500	All	1			

Green (1) = Not covered and not affected.
Yellow (2) = Submit initial notification. R&R for waste gas usage.
Red (3a) = Reduce CH2O 76% or limit CH2O to 350ppbvd@15%O2
Red (3b) = Reduce CO 93% or limit CH2O to 14ppmvd@15%O2
Red (3c) = Reduce CO 58% or limit CH2O to 12ppmvd@15%O2
Red (3d) = Reduce CO 70% or limit CH2O to 580ppbvd@15%O2
CH2O = formaldehyde, CO = carbon monoxide
SI = spark ignition, CI = compression ignition

What's New?
Final Rules

Stationary Combustion Turbines (3/5/04)

Limits emissions from new/reconstructed turbines rated 1MW or more. Prime power and peak-shaving units are primary regulatory target.

- **Applicability**
  - **Major HAP sources**
  - **New/reconstructed Only**
    - **≥ 1 megawatt**
  - *Includes* **portable and transportable units**
- **Exclusions Include**
  - **R&D turbines**
- **Affected Source**
  - *Each* **turbine**
- **Limited Requirements**
  - **Emergency and AK North Slope units: Submit initial notification (IN) only**
    - **≥ 10% waste gas fueled units: IN and fuel R&R**
- **Of Note**
  - **Emergency units have no time limits, maintain per mfr**
  - **No limited use exemption**
  - **Oil R&R requirements for facilities with gas-fired units that burn oil in any turbine**

Stationary Combustion Turbines NESHAP

Affects Units on Major HAP Sources

Rating	Turbine Type	Existing	New/RC
≥1.0 MW	Emergency Power Turbines and Turbines on Alaska's North Slope	1	2
	Gas-Fired Units at facilities that burn oil no more than 1000hrs/yr		
	Waste Gas Fueled Turbines		
	Research & Development Turbines		1
	All Other Turbines		3
<1.0 MW	All Turbines <1.0 MW	1	

Green (1) = Covered but not affected
Yellow (2) = Submit initial notification. Some fuel monitoring, recordkeeping and reporting requirements may apply.
Red (3) = Limit formaldehyde emissions to 91 ppbvd @ 15%O2

What's New?
Final Rules

- **Stationary Combustion Turbines (3/5/04), Proposed Amendment/Stay (4/7/04, 8/18/04)**
  - **EPA proposed to delist the following turbines:**
    - Lean premix gas-fired turbines located at facilities that burn oil no more than an aggregate total of 1,000 hours per year in any of their turbines,
    - Diffusion flame gas-fired turbines located at facilities that burn oil no more than an aggregate total of 1,000 hours per year in any of their turbines,
    - Emergency stationary combustion turbines, and
    - Stationary combustion turbines operated on the North Slope of Alaska.

What's New?
Final Rules

- **Engine Test Facilities**
  - **Applies to Major HAP Sources**
  - **Applies to New and Reconstructed Sources**
  - **Affected Source = Collection of All Equipment…**
  - **Outboard Motors Not Affected If Coupled With Propeller (Preamble)**
  - **CO or THC: 20 ppmvd or 96% reduction**

Engine Testing Facilities NESHAP: Final Rule

Affects Units on Major HAP Sources Only

Affected Source	Type of Engine Test Cell/Stand			
	Rocket Engine	Turbine Engine	Uninstalled IC Engine	
	All	All	<25 hp	≥25 hp
New and Reconstructed	1		2	3
Existing				

Green (1) = No applicable requirements
Yellow (2) = Submit initial notification only
Red (3) = Limit carbon monoxide (CO) or total hydrocarbons (THC) to 20 ppmvd @ 15%O2 or limit CO or THC by 96%

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Regulatory Activity Involving OTHER Final Rules

- Chromium NESHAP Amendments (7/19/04)
- Risk Management Plan Amendments (4/19/04)
- Organic Liquids Distribution NESHAP (2/3/04)
- Misc. Organic Chemical Mfg. NESHAP (11/10/03)
- Site Remediation NESHAP

What's New?
Final Amendments

- **Chromium NESHAP (7/19/04)**
  - **CMPME allowable pressure drop variance from operating limit increased from ±1 to ±2 in. H2O**
    - Does not apply during wash down cycles
  - **Facilities can now use fume suppressants to control hard chrome plating tanks in lieu of control devices**
  - **Facilities complying with the 45 dynes/cm surface tension limit must now comply with a 35 dynes/cm limit when using a tensiometer instead of a stalagmometer**

What's New?
Final Amendments

- **Chromium NESHAP (7/19/04)**
  - **New chromium mass emission limit for tanks equipped with enclosing hoods**
  - **Definition of affected source (tank) expanded to include peripheral equipment, such as rectifiers and anodes, to prevent tank replacement from triggering the monetary threshold for reconstruction.**

Military RMP Submissions (June 1999)

AIR FORCE

- Altus AFB, OK
- Cape Canaveral Air Station, Fl
- Holloman AFB, NM
- Air Force Academy, CO
- Scott AFB, IL
- Vandenberg AFB, CA

NAVY

- NSWC Indian Head, MD
- NAS Pensacola, FL
- NAS Jacksonville, FL
- NAWS China Lake, CA
- NSB Kings Bay, GA
- NTTC Corry Station, Fl
- NS Mayport, Fl
- NS Roosevelt Roads, PR
- PWC Guam, GU

MARINES

- MCAS Cherry Point, NC
- MCAS Yuma, AZ
- MCB Camp Pendleton, CA
- MCB Quantico, VA

DLA

- Defense Supply Center Richmond, VA

Military RMP Submissions (June 1999)

ARMY

- Anniston Army Depot, AL
- Camp Roberts, CA
- Cold Regions Research and Engineering Laboratory, NH
- Dalecarlia WTP, DC
- Fort Benning, GA
- Fort Detrick, MD
- Fort George G. Meade, MD
- Fort Leavenworth, KS

ARMY

- Fort Monroe, VA
- Fort Riley, KS
- Hawthorne Army Depot, NV
- Holston Army Ammunition Plant, TN
- McMillan WTP, DC
- Radford Army Ammunition Plant, VA
- Red River Army Depot, TX
- Redstone Arsenal, AL

ARMY

- Fort Rucker, AL
- Aberdeen Proving Grounds, MD
- Schofield Barracks, HI
- Fort Irwin, CA
- Fort Gordon, GA
- Fort Bragg, NC
- Fort Sill, OK
- White Sands Missile Range, NM

What's New?
Final Amendments

- **Risk Management Plan Rule: Amended 4/19/04**
  - **Add reportable chemical accidents to the RMP within *six months* of accident**
  - **Correct emergency contact within *one month* of change**
  - **Executive summary no longer needs to mention the off-site consequence analysis**
  - **Add additional data elements to RMP by 6/21/04**
    - 1) e-mail address of person responsible for RMP (optional);
    - 2) e-mail address for emergency contact (if any);
    - 3) contact information for RMP preparation contractor (if any);
    - 4) type and reason for any changes being made.
  - **Uncontrolled chemical reactions on accident causes list**
  - **5-yr deadline to update RMPs filed before 6/21/99 is 6/21/04**

Keep Your RMPs Up To Date!

- **Update Required**
  - **Every 5 years (6/21/04 for most facilities)**
  - **3 years after a new substance is listed**
  - **On the day a regulated substance is first present above a threshold quantity**
  - **Within 6 months of a change that requires a revised PHA, hazard review, or offsite consequence analysis**
  - **Within 6 months of a change that alters the Program Level or RM Program applicability**
  - ***Within 6 months of a reportable chemical accident***
- ***Correction Required***
  - ***By 6/21/04 to include new data elements added on 4/9/04***
  - ***Within 1 month of a change in the emergency contact information***

Organic Distribution NESHAP (2/3/04)

- **Applicability**
  - Major HAP sources
  - Existing/new/reconstructed
  - OL containing ≥ 5% HAP with VP of ≥ 0.1 psia
- **Excludes**
  - Lots of low VP fuels
  - Hazardous waste
  - Wastewater & ballast water
  - Nonpermanent OLD equip
- **Affected Source**
  - All OLD Equipment

Limits Emissions From

- **Storage Tanks**
  - Existing ≥ 5kgal & ≥ 4psia
  - Existing ≥ 50kgal & ≥ 0.1psia
  - New/RC 5-10kgal & ≥ 4psia
  - New/RC ≥10kgal & ≥ 0.1 psia
  - See Table 5
- **Transfer Racks**
  - See Table 6
- **Equipment Leak Rqmts**
  - Apply only if facility must control a tank or rack
- **Transport Vehicles**

What's New?
Final Rules

- **Reinforced Plastic Composites Prod. (4/21/03)**
  - **Applies to Major HAP Sources**
  - **Applies to Styrene-Containing Resins/Gel Coats**
  - **Exempts**
    - Repair of Parts that You Did Not Manufacture
    - Nonroutine Part Manufacturing
    - Facilities Using < 1.2 tons/yr Resins/Gel Coats
    - R&D Facilities, Personal Activities, Prepreg Materials
    - Military Specification Resins/Gel Coats

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Regulatory Activity Involving FUTURE Rules

- DLSME NESHAP (I already covered this.)
- Area Source Category NESHAPs
- Other Solid Waste Incinerator NSPS & EG

Future Rules - Area Source NESHAPs
Area Source Categories Include:

Listed before 1999
- ***Stationary IC Engines (10/06)***
- ***Boilers***

Listed 7/19/99
- ***Gasoline Dist. -Stage I (10/06)***
- ***Hospital Sterilizers (4/05)***
- ***Paint Stripping Operations***

Listed 6/26/02
- ***Autobody Refinishing***
- **Flexible Polyurethane Foam Production**
- **Iron & Steel Foundries**
- **Misc. Organic Chemical Mfg**
- ***Plating & Polishing***
- **Secondary Nonferrous Metals**
- **Wood Preserving**

Listed 11/22/02
- **Chemical Preparations**
- **Nonferrous Foundries, nec**
- ***Plastic Parts & Products (coating)***
- **Electronic Equip. Finishing Ops**
- ***Fabricated Metal Products Mfg, nec***
- ***Fabricated Plate Work (Boilers)***
- ***Fabricated Structural Metal Mfg***
- **Heating Equipment Mfg**
- **Industrial Machinery & Equipment: Finishing Ops**
- **Iron & Steel Forging**
- **Valves & Pipe Fittings Mfg**

***weld/blast/grind/electroless plate**

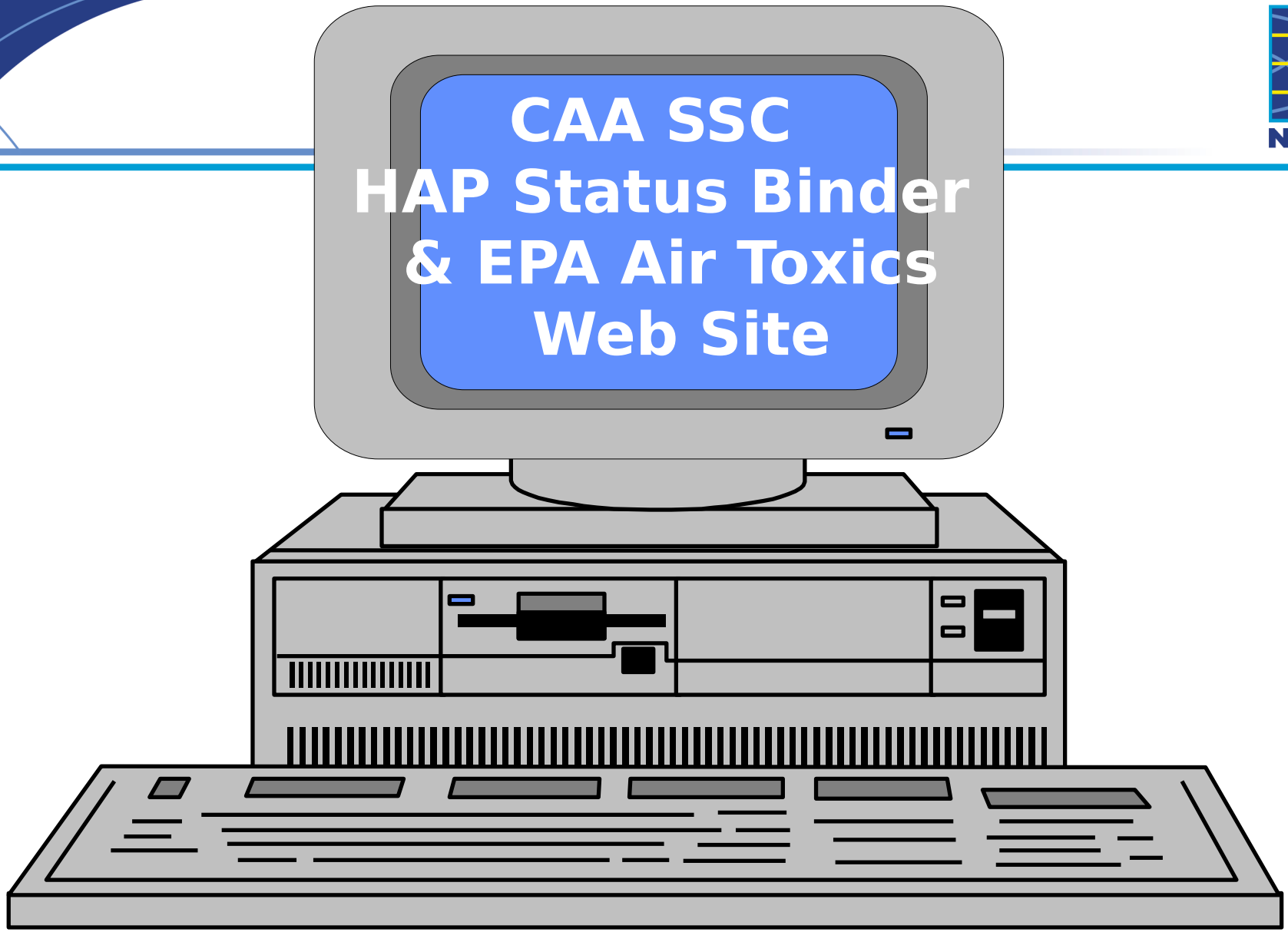
Future Rules – Incinerator NSPS and EG

Source Category/Rule	Applicability	Status
Agricultural Waste	TBA	Pre-Rule
Construction/Demolition Waste	TBA	Pre-Rule
Crematory/Pathological Waste	TBA	Pre-Rule
Municipal Waste (Very Small)	< 35 tpd	Pre-Rule
Petroleum-Contaminated Waste	TBA	Pre-Rule
Residential Waste	TBA	Pre-Rule
Sewage Sludge	TBA	Pre-Rule

Propose by 30 Nov 04

Promulgate by 30 Nov 05

Existing Sources Comply by 2008-10



http://www.denix.osd.mil/HAP (DoD Accounts Only)

http://www.epa.gov/ttn/atw/